

**LESLIE K. TAMPPARI**

**JET PROPULSION LABORATORY**  
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## **Education**

Ph.D., Geophysics and Space Physics, University of California, Los Angeles (2000)  
M.S., Geophysics and Space Physics, University of California, Los Angeles (1997)  
B.S., Mathematics, University of Arizona, (1990)

## **Research Interests**

- Water cycling in the north polar region of Mars
- Water-ice cloud detection and interannual variability on Mars
- Martian dust: interannual variability, diurnal variability, dust devils
- Martian analog studies in the Antarctic Dry Valleys

## **Professional Experience**

Jet Propulsion Laboratory (1990 – present)  
Principal Investigator, NASA International Polar Year (2007-present)  
Principal Investigator, JPL R&TD program (2005-present)  
Project Scientist, NASA Phoenix Scout Mission (2003–present)  
Co-Investigator, NASA Phoenix Scout Mission (2002–present)  
Deputy Project Scientist, NASA Mars Science Laboratory (2001-2003)  
Principal Investigator, NASA Mars Global Surveyor Data Analysis Program (2001-2004)  
Principal Investigator, NASA Mars Data Analysis Program (2000-2003)  
Co-Investigator, NASA Jupiter Data Analysis Program (1998-2000)  
Science Lead, Team-X, Europa and Titan future missions studies (1999–2001)  
Science Coordinator, Galileo Photopolarimeter/Radiometer Experiment (1990–1999)  
Deputy Lead, JPL Satellites Working Group (1993-1997)  
Deputy Lead, Science Instrument Testbed Team (1996)

## **Awards**

Level C Bonus Awards (2004, 2005, 2006, 2008)  
Level B Bonus Award (2002, 2007, 2008)  
NASA Exceptional Achievement Medal recipient (April 1998)  
Nova award “Initiative and Excellent Overview” (June 1997)

## **Professional Activities**

Organizer and co-convener of a Phoenix Special Session at AGU (2008)  
Organizer and guest editor for JGR-Planets special issue on Phoenix instruments, landing sites, and operations (2008)  
7<sup>th</sup> International Conference on Mars scientific organizing committee member (2007)  
4<sup>th</sup> Mars Polar Conference scientific organizing committee (Oct. 2006)  
JPL Science Advisory Group (2005-present)  
NASA PG&G Review Panel (2002-2003)  
NASA Mars Reconnaissance Orbiter Instrument Review Panel (2001)  
American Geophysical Union (AGU) member (since 2000)  
American Astronomical Society, Division of Planetary Sciences member (since 1995)

## Mentoring Experience

Yolanda Torres, Caltech Summer Undergraduate Research Fellowship, 2003

Project title: Water-ice clouds over Hellas Basin – a Historical Perspective

Dr. Zheng Qu, Caltech Post-doctoral fellow, 2003-2005

Focus area: Water-ice clouds and transport in the north polar region of Mars

Nathan Drake, Caltech Summer Undergraduate Research Fellowship, 2005

Project title: Dust devils in the northern polar region of Mars

Alexey Pankine, JPL Post-doctoral fellow, 2007-present

Project title: Mars Spring and Summer North Polar Water Vapor, Ice and Dust Mapping and Interannual Comparison

## Publications

**Tamppari, L. K.**, et al., 2008. The expected atmospheric characteristics during the Phoenix mission, *J. Geophys. Res.*, 113 (E00A20), doi:10.1029/2007JE003034.

**Tamppari, L. K.**, M. D. Smith, D. S. Bass, A. S. Hale, 2007. Water-ice clouds and dust in the north polar region of Mars using MGS TES data, *Planetary and Space Sciences*.

**Tamppari, L. K.**, R. W. Zurek, D. A Paige, 2002. Viking Era Diurnal Water Ice\_Clouds, *J. Geophys. Res.*, 108(E7), p. 5073.

**Tamppari, L. K.**, 2000. Mars Missions, *Space Sciences*, Vol. 4, pp. 98-101, Macmillan Reference USA.

**Tamppari, L. K.**, R. W. Zurek, D. A Paige, 2000. Viking Era Water Ice Clouds, *J. Geophys. Res.*, 105 (E2), pp. 4087-4107.

**Tamppari, L. K.**, J. R. Spencer, T. Z. Martin, 1995. Observing the Icy Jovian Satellites with the Galileo Photopolarimeter Radiometer Instrument, *J. Geophys. Res.*, 100 (E9), pp. 18973-18983.

Pankine, A., **L. K. Tamppari**, M. D. Smith, 2008. Water vapor variability in the North Polar Region on Mars from Viking MAWD and MGS TES datasets, *in preparation for submission to J. Geophys Res.*

Golombek, M. P., et al. (2008), Size-frequency distributions of rocks on the northern plains of Mars with special reference to Phoenix landing surfaces, *J. Geophys. Res.*, 113, E00A09, doi:10.1029/2007JE003065.

Hale, A. S., **L.K. Tamppari**, D. S. Bass, M. D. Smith, 2008. Martian Water-ice Clouds: A View from MGS TES, *submitted to J. Geophys. Res.*

Martin, T. Z., **L. K. Tamppari**, 2008. Diurnal variation of Martian dust opacity, *in preparation for submission to Icarus*.

Tsuyuki, G., **L. Tamppari**, T. Martin, and J. Murphy, 2007. "Development of the Surface Thermal Environment for the Mars Scout Phoenix Mission," Paper Number 2007-01-3239, Proceedings of the International Conference on Environmental Systems, Society of Automotive Engineers, Chicago, IL, dated July 2007.

Drake, N. B., **L. K. Tamppari**, R. D. Baker, B. A. Cantor, and A. S. Hale, 2006. Dust devil tracks and wind streaks in the North Polar Region of Mars: A study of the 2007 Phoenix Mars Lander Sites, *Geophys. Res. Lett.*, 33, L19S02, doi: 10.1029/2006GL026270.

- Hale, A. Snyder, Bass, D.S., **Tamppari, L.K.** 2005. Monitoring the perennial martian northern polar cap with MGS MOC. *Icarus*,**174**, pp. 502-512.
- Rathbun, J. A., J. R. Spencer, **L. K. Tamppari**, T. Z. Martin, L. Barnard, and L. D. Travis, 2004. Mapping of Io's thermal radiation by the Galileo photopolarimeter-radiometer (PPR) instrument, *Icarus* V. 169, No. 1, pp. 127-139.
- D. W. Beaty, S. Miller, W. Zimmerman, J. Bada, P. Conrad, E. Dupuis, T. Huntsberger, R. Ivlev, S. S. Kim, B. G. Lee, D. Lindstrom, L. Lorenzoni, P. Mahaffy, K. McNamara, D. Papanastassiou, S. Patrick, S. Peters, N. Rohatgi, J. J. Simmonds, J. Spray, T. D. Swindle, **L. Tamppari**, A. Treiman, J. K. Wolfenbarger and A. Zent, 2004, Planning for a Mars in situ sample preparation and distribution (SPAD) system: *Planetary and Space Science*, v. 52, p. 55-66.
- Cooper, J. F., C. B. Phillips, J. R. Green, X. Wu, R. W. Carlson, **L. K. Tamppari**, R. J., Terrile, R. E. Johnson, J. H. Eraker, N. C. Makris, 2002. Europa Exploration: Science and Mission Priorities. The Future of Solar System Exploration, 2003-2013, ASP Conference Series, Vol. 272, pp. 217-252.
- Spencer, J. R., J. A. Rathbun, L. D. Travis, **L. K. Tamppari**, L. Barnard, and T. Z. Martin, 2000. High-resolution observations of Io's thermal emission from the Galileo photopolarimeter-radiometer, *Science*, **288**, pp. 1198-1201.
- Spencer, J. R., **L. K. Tamppari**, T. Z. Martin, L. D. Travis, 1999. Temperatures on Europa from Galileo PPR: Nighttime Thermal Anomalies, *Science*, **284**, p. 1514-1516.
- Orton, G. S., J. R. Spencer, L. D. Travis, T. Z. Martin, **L. K. Tamppari**, 1996. Galileo photopolarimeter-radiometer observations of Jupiter and the Galilean satellites, *Science*, 284 (5286): 389-391.
- Martin, T. Z., G. Orton, L. Travis, **L. Tamppari**, I. Claypool, 1995. Observation of Shoemaker-Levy Impacts by the Galileo Photopolarimeter Radiometer, *Science* **268**, p. 1875-79.